BY JIM CARROLL

Whither weather

WE'VE GOT THE TECHNOLOGY, BUT MOTHER NATURE CONTROLS THE WEATHER. GET USED TO IT

Back in September, as Hurricane Floyd raced up the eastern coast of North America, *Globe and Mail* columnist Rick Salutin wrote: "I have seen the future of the news and it is weather."

He pointed out something that we had all noticed: flip through the channels, from CTV to CNN to ABC to CBC or almost anywhere else, and "live Floyd coverage" was almost guaranteed. As Salutin said, it was a ▸

ILLUSTRATION: TRACEY WOOD

case of "all Floyd, all the time," as the media prepared for the hurricane to come ashore and wreak havoc.

As it turned out, though Floyd was bad (it killed 14 people), it wasn't as bad as predicted. This left many people observing that, yet again, the weather forecasters had got it wrong. We have all become increasingly obsessed with knowing about the weather, and we remain just as skeptical about the prediction skills of the forecasters. This uneasy relationship has a long history.

YESTERDAY

Back in February 1870, US President Ulysses S. Grant signed a bill to create a national weather service. Its objective was "to warn of storms on the Great Lakes and on the Atlantic and Gulf coasts." One year later, the new body issued its first warning, advising the Great Lakes area that some bad winter weather was on its way. History doesn't tell us if the forecast was correct.

TODAY

Since then, governments around the world have invested billions of dollars to establish meteorology departments and private industry has jumped into the fray as well.

The weather industry is a big one, feeding a weather-hungry public with a steady stream of updates. Meteorologist David Phillips, author of the best-selling book *The Day Niagara Falls Ran Dry!*, likes to point out that nine out of every 10 Canadians start their day with a weather forecast.

Never before has the average citizen had so much weather information at his or her disposal. Entire television channels (the Weather Network in Canada and the Weather Channel in the US) are devoted to the subject, 24 hours a day. The Weather Network, now 10 years old, is carried across Canada on more than 1,000 cable systems and on satellite, and is watched by between five and eight million people every week.

Specialty channels aren't alone in the field. Constantly updated weather forecasts are found on other TV stations, radio stations and in newspapers. Then there is the Internet.

We can now sit in our homes and access countless satellite images, up-to-the-minute radar reports, raw weather data, temperature sensors, reports on cloud-top height, weather commentary, three-day forecasts, five-day forecasts, monthly forecasts! We do so by tapping into information generated by a massive worldwide weather infrastructure.

And what an infrastructure it is. Huge resources around the planet are devoted to measuring and analyzing weather data in order to create all those forecasts. Satellites, radar, weather buoys at sea, weather balloons and planes, and weather stations.... Perhaps no other area of human endeavour involves such a highly integrated global matrix of interconnected measuring devices, each of them feeding an ever-

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increasing stream of data into computers and supercomputers, each of which in turn crunches out the next forecast.

A massive global industry keeps this mass of equipment in check and uses the data that it pulls in. In the US, some 4,700 people work for the National Weather Service, analyzing some 22 million weather observations each year, and creating some two million forecasts and weather warnings. Tracking the weather. Feeding our obsession.

Yet many of us believe those forecasters still can't get it right. Ask yourself: when did you last complain about a forecast? If you are like most people, it was less than 24 hours ago.

The weather industry argues that in fact it has a pretty good track record. Last October, a spokesperson for Environment Canada told the *Calgary Sun* that its predictions are accurate 80 to 85 per cent of the time. (The interview followed a barrage of complaints about a freak storm that nobody had foreseen.

It's the other 15 to 20 per cent of the time that infuriates us.

TOMORROW

Will weather forecasting ever be accurate? In a word, no.

According to an article in *USA Today*, many meteorologists say that while one-day forecasts are now 95 per cent accurate, and two-day forecasts are right about 85 per cent of the time, things still get really rotten after the five-day mark. By then, expect accuracy of only 50 to 70 per cent.

Many of them believe the numbers will never improve.

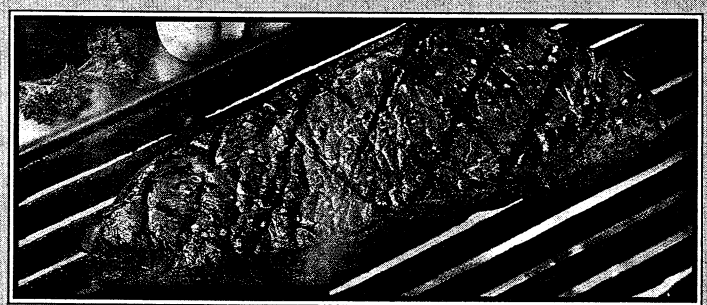
The last few years of El Niño and La Niña phenomena have taught them the tremendous impact of ocean warmth on global weather patterns. With the oceans making up a huge percentage of the earth's surface, they can change weather quite quickly and dramatically (as well as over the longer term).

Of course, this challenge isn't holding them back. Long-term, large-scale forecasting may remain difficult, but there is now great excitement about micro-forecasting: that is, trying to predict the weather for an area as small as 10 square kilometres for the next few hours. This kind of information, meteorologists believe, will be a major trend because it is of such value to farmers, organizers of outdoor events and other industries needing pinpoint information.

But no matter what forecasters do, we will probably continue to groan and grumble. The problem is, we are dealing with a field of scientific endeavour that will never be able to deliver the perfect accuracy we crave. ■

Jim Carroll (jcarroll@jimcarroll.com) was in the middle of a weather-related flight delay when he wrote this article.

When the plane lands it will refuel.
You should do the same.



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